ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP PROGRAM
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL

PROJECT INFORMATION

Project Title: Proposed Catchment Development 96 Hills - Rock Tank	**Project No.**
Region/GMU: 5/37B	**HPC: Tucson**

Project Type: New Catchment Construction

Project Description:
Install a new 11,400 gallon ring tank/R panel apron system in the north end of the 96 Hills. The 96 Hills represents some of the best mule deer and javelina habitat in the unit. It has been rested for approximately 10 years, grazed only during short periods during spring green ups. Water, however, is extremely scarce in the range and is only present in earthen stock tanks after a heavy monsoon period and during the winter and early spring months and seldom lasts into May. A new high capacity water system will benefit and potentially increase mule deer and javelina populations in the area thereby increasing hunter opportunity.

Wildlife Species to Benefit: mule deer, javelina, small game and nongame

Possible Funding Partners:

Implementation Schedule:
Beginning: March 1, 2007
Completed: June 30, 2009

PROJECT FUNDING

SBG Funds Requested: **$26,214**

Cost Share Funds: **$19,350**

Total Project Costs: **$45,564**

PARTICIPANT INFORMATION

Applicant: Ben Brochu **Telephone:** Office (520) 229-3222 or cell (520) 907-6079	**Address:** Arizona Game and Fish Department 555 N. Greasewood Road Tucson, AZ 85745

AGFD Contact and Phone No.
(If applicant is not AGFD personnel)

Coordinated with: AGFD – Ed Jahrke, Joe Currie, Jim Heffelfinger ASLD – John Patton via phone and email	**Date:** 2-5,7,26-07
Applicant's signature:	**Date:**

SEND COMPLETED APPLICATIONS TO:
Game Branch
2221 W. Greenway Rd.
Phoenix, AZ 85023
mdisney@azgfd.gov

NEED STATEMENT/PROBLEM ANALYSIS:

Game management unit 37B was once regarded as a premier mule deer unit. Beginning around 1995, mule deer numbers in the unit began to decline. They have not recovered since.

Mule deer numbers and distribution have been declining throughout the West since the latter third of the 20th century. To address this concern, the Western Association of Fish and Wildlife Agencies (WAFWA), an organization represented by 17 states and four Canadian provinces, created a Mule Deer Working Group (Group). Using adaptive resource management, the Group sent out to find "solutions to our common mule deer management problems" in the seven different ecoregions in North America. Overall, loss and degradation of habitat was determined to be the single greatest factor that has caused declines in mule deer. In the Southwest Desert Ecoregion, rainfall and competition with livestock were found to be the two biggest limiting factors. The number one recommendation of the Group to improve mule deer management in the Southwest Desert Ecoregion was to **create sources of water in areas where water is limiting** and where other potentially limiting factors are being addressed (we are attempting to address the other limiting factor, competition with livestock, in the submitted proposal titled "Desert Mule Deer Browse Condition and Trend Monitoring for 37B" which was funded in 2005 but has **not** been since). Also, consistent with the Group's recommendation is the Department's Species Management Guidelines (SMG) which provides goals, objectives, strategies and procedures for a specific species. The SMG outlines four ways to improve and enhance deer habitat to accomplish the overall goal of increasing mule deer populations to levels that provide diverse recreational opportunities. Number one on the list is: Protect and maintain current water sources. Where water is lacking and the distribution and abundance of deer can be influenced, develop **new** water sources.

The 96 Hills represents some of the best mule deer and javelina habitat in the unit. It has been rested for approximately 10 years, grazed only during short periods during spring green ups. Jojoba (*Simmondsia chinensis*), a critical browse species of mule deer as described below, is abundant throughout the 96 Hills but is underutilized due to a lack of nearby water. Water is extremely scarce in the range and is only present in earthen stock tanks after a heavy monsoon period and during the winter and early spring months and seldom lasts into May. The Wildlife Management Handbook, *Managing Desert Mule Deer*, states the following: Water is a critical component of mule deer habitat. Deer habitat, no matter how attractive, will not be utilized if it is not near a source of water. Water sites should be no more than 2-3 miles apart and even closer in rough terrain. Browse comprises from 40-70% of the annual diet of mule deer and is especially important in fall, winter and early spring. During droughts browse may contribute up to 90% of the annual diet of mule deer.

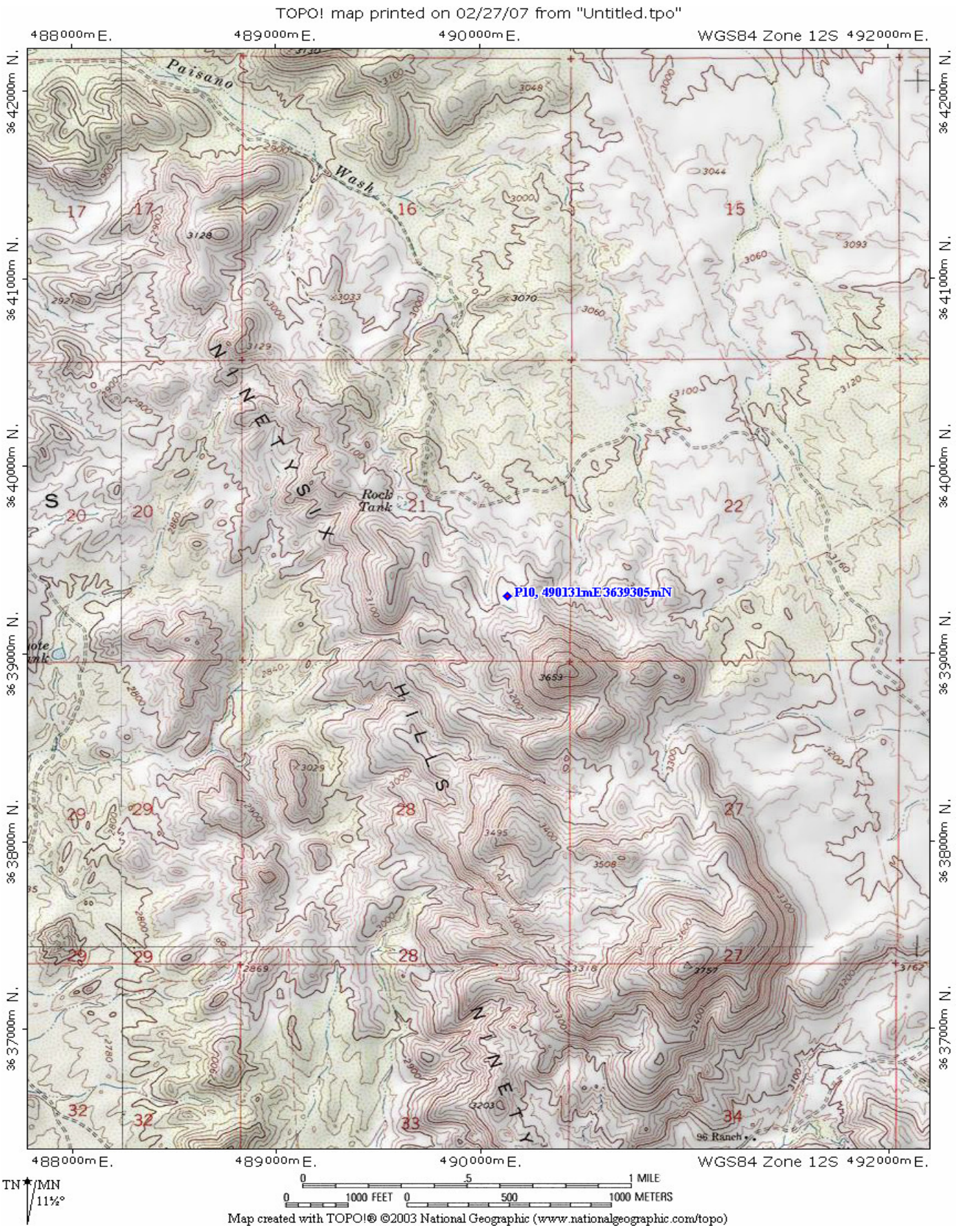
PROJECT OBJECTIVES:

- To increase deer and javelina populations by providing a dependable, long term, self-sustaining quality water source.
- To increase hunter opportunity.
- To install a system that has a long lifespan (40-50 years for storage and collection systems, 25 years for drinking troughs)
- To install a system that does not require supplemental hauling except in rare or exceptional circumstances
- To install a system that has minimal visual impacts and blends in with surrounding landscape
- To install a system that is accessible and that requires minimal routine maintenance

PROJECT STRATEGIES:
Utilize big game special tag funds, personnel from the Arizona Game and Fish Department Development Branch and approximately 15 volunteers to install a new 11,400 gallon fiberglass ring tank/R panel apron system. Development will include the following:

1. Purchase and install (2) 3'x18' fiberglass ring tanks
2. Purchase and install (1) 3'x4' walk-in standard trough.
3. Purchase and install (1) 24'x96' R panel apron and required components
4. Purchase and install required plumbing for the system
5. Purchase and install new wildlife "friendly" pipe rail fence around facility.

PROJECT LOCATION:
Game Management Unit 37B
UTM Coordinates: 490131mE 3639305mN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Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name):
The project site is on land administered by the Arizona State Land Department, Tucson Field Office, 4455 S. Park Avenue Suite 101 Tucson, Arizona 85714 (520) 628-5480.

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?

HABITAT DESCRIPTION:
Game management unit 37B is located in Pinal County, Arizona, southeast of Phoenix. Two main biotic community types, Sonoran Desertscrub and Semidesert Grassland, comprise the bulk of the habitat in 37B. The proposed catchment is located within the Semidesert Grassland community. Common vegetation includes various types of grama grasses (*Bouteloua spp.*), bush muhly (*Muhlenbergia porteri*), turpentine bush (*Ericameria laricifolia)*, foothill palo verde (*Circidium microphyllum*), mesquite (*Prosopis spp*.), and desert hackberry (*Celtis pallida*). Average rainfall is approximately 15" and elevation is approximately 3250'.

ITEMIZED USE OF FUNDS:

Item	Dimentions	Cost	Cost Share	Funds Needed
2-3'x18' fiberglass ring tank (5700g each)	3'x18' each	$12,000		$12,000
24'x96' R panel apron	24'x96'	$7,500		$7,500
3'x4' walk-in standard trough	3'x4'	$2,000		$2,000
Wildlife "friendly" livestock exclosure fence	150'x150'	$2,000		$2,000
Plumbing		$750		$750
Tax @ 8.1%		$1,964		$1,964
AGFD Labor		$15,000	AGFD	$0
Volunteer Labor	15 people	$4350	Volunteer	$0
Total		$45,564	$19,350	$26,214

The Department's Development branch will provide the necessary heavy equipment and personnel to oversee the completion of the project.

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:
AGFD Development Branch: acquire the materials and provide equipment and minimal labor for construction.
15 - Willing and able bodied volunteer sportsmen: provide labor
Tucson Habitat Partnership Committee: coordinate project funding opportunities

-----Original Message-----
From: Ed Jahrke
Sent: Wednesday, February 28, 2007 2:57 PM
To: Ben Brochu
Cc: Jim Heffelfinger; Joseph M. Currie
Subject:

Ben,

I will commit Development Branch Wildlife Habitat Construction Crews to two proposed catchments in your district (37B); Rock Tank Catchment, a new water development, and # 752, Tortilla # 3, a redevelopment project, provided that they are funded through the SBGTF process and your Regional Water Development Representative (Jim Heffelfinger) agrees that they are a high priority on the Water Development Implementation Schedule. If everyone is in concurrence, my hopes would be to complete these two projects by late fall/early winter 2007, if the funding is in place. Thanks.

Ed Jahrke
Habitat Implementation Program Manager
Development Branch
Arizona Game and Fish Department
2221 W. Greenway Rd.
Phoenix, AZ 85023
(602) 789-3482
(602) 316-5843 cell

PROJECT MONITORING PLAN:
Monitoring catchment water levels and minor maintenance is done at least twice per year at every catchment by the wildlife manager.

PROJECT MAINTENANCE:
Maintenance will be the responsibility of AGFD.

PROJECT COMPLETION REPORT TO BE FILED BY:
Ed Jarke or Joe Currie

WATER DEVELOPMENT PROJECTS (see attached worksheet):

TREE SHEARING (AGRA-AXE, PUSH) PROJECTS (see attached worksheet):

ARIZONA GAME AND FISH DEPARTMENT

WATER DEVELOPMENT WORKSHEET

PROJECT NAME: Proposed Catchment Development 96 Hills – Rock Tank

1) Is the water development listed as a priority in the most recent "Wildlife Water Development Annual Implementation Schedule?"
No

2) Please list the Development Branch personnel and date coordinated with for this project.
Ed Jahrke and Joe Currie 2-5-07 via email and 2-27-07 via telephone (Ed)

3) What is the estimated annual inches of precipitation for the area? (mark one)
___2-4 ___4-6 ___6-8 ___8-10 ___10-12 ___12-14 _X__14-16 ___>16

4) Is there a perennial water source available to big game within four miles of this project?
___YES (please complete #5 below) _X__NO (skip #5 below)

5) For the accessible, perennial water source nearest this project:
Name of water source:
Type of water source (catchment, spring, dirt tank, etc.):
Ownership of water source:
Distance in miles from project:

6) Is the target wildlife species a result of transplant efforts? ___YES _X__NO

7) Please list any special land management status for the project site (i.e. Wilderness, National Park, National Monument, etc). If private land, list landowner.
N/A

8) Please provide the following information about access to the proposed site:
Type of access (mark one): ___2x4 vehicles __X_4x4 only ___foot only**
**If foot access only: Distance in miles: Approx. hiking time:

-- Does access to this site require crossing private or tribal lands? ___YES _X__NO

-- Please describe any restrictions to public access: N/A

9) Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.

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10) Was a site visit completed? ___ Yes __X_No

If Yes, please list personnel that attended and date.